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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,705	03/14/2002	William Edward Weinman	1428:101	2974

7590  
07/16/2004  
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EXAMINER

WASSUM, LUKE S

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/098,705	Applicant(s) WEINMAN, WILLIAM EDWARD	
	Examiner Luke S. Wassum	Art Unit 2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,9,10,12 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,6-8,11 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>06122002</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *The Invention*

1. The claimed invention is a polymorphic database wherein the data contained therein comprises a records data set containing the data, and a categories data set containing schematic data types and relationships between entries in the records data set.

### *Priority*

2. The Applicant's claim to domestic priority under 35 U.S. C. § 119(e) to provisional patent application 60/275609, filed 14 March 2001, is acknowledged. Since the subject matter disclosed in the instant application is consistent with that of the provisional application, the priority date of the instant application is 14 March 2001.

### *Information Disclosure Statement*

3. The Applicants' Information Disclosure Statement, filed 12 June 2002, has been received and entered into the record. Since the Information Disclosure Statement complies with the provisions of MPEP § 609, the references cited therein have been considered by the examiner. See attached form PTO-1449.

### *Specification*

4. The disclosure is objected to because of the following informalities:

There is a typographical error on page 10, line 26, "CATEOGORY\_PEERS" should be "CATEGORY\_PEERS".

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4, 5, 9, 10, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by **Belove et al.** (U.S. Patent 5,115,504).

7. Regarding claim 1, **Belove et al.** teaches a polymorphic database as claimed, comprising:

a) an application program (see disclosure that the invention is embodied in the AGENDA software product, col. 3, lines 29-44); and

b) data accessible by the application program and on which the application program is operative, wherein the data comprises:

i) a records data set (RDS) containing at least one RDS entry having data fields

configured for representing data (see disclosure that the first group of elements represents items, col. 1, lines 50-51); and

ii) a categories data set (CDS) containing at least one CDS entry configured for being associated with the at least one RDS entry and having at least one data type field sufficient to describe the type of data contained by the at least one

associated RDS entry (see disclosure that the second group of elements represents categories, col. 1, lines 50-51).

8. Regarding claim 9, **Belove et al.** teaches a method for defining data/type associations as claimed, the method comprising the steps of:

a) defining an application program (see disclosure that the invention is embodied in the AGENDA software product, col. 3, lines 29-44); and

b) defining data accessible by the application program and on which the application program is operative, wherein the data comprises:

- i) a records data set (RDS) containing at least one RDS entry having data fields configured for representing data (see disclosure that the first group of elements represents items, col. 1, lines 50-51); and
- ii) a categories data set (CDS) containing at least one CDS entry configured for being associated with the at least one RDS entry and having at least one data type field sufficient to describe the type of data contained by the at least one associated RDS entry (see disclosure that the second group of elements represents categories, col. 1, lines 50-51).

9. Regarding claims 2 and 10, **Belove et al.** teaches a database and method further comprising for each CDS entry a unique category identifier (see disclosure of category identifiers "Companies", "Financial Information", "Personnel", "Name", "Address" and "Salary" in col. 1, lines 7-22; see also col. 4, lines 9-10), and for each RDS entry a field for storing the unique category identifier of the

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CDS entry with which a respective RDS entry is associated (see disclosure that items can be linked to categories, col. 2, lines 41-42).

10. Regarding claims 4, 5, 12 and 13, **Belove et al.** teaches a database and method further comprising for each CDS entry a unique category identifier (see disclosure of category identifiers "Companies", "Financial Information", "Personnel", "Name", "Address" and "Salary" in col. 1, lines 7-22; see also col. 4, lines 9-10), and an inheritance field configured for storing the unique category identifier corresponding to another CDS entry from which properties will be inherited for a cumulatively respective CDS entry (see col. 5, lines 3-13; see also Figure 4).

#### *Allowable Subject Matter*

11. Claims 3, 6-8, 11 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a polymorphic database, wherein data is organized in a records data set containing actual data, and a categories data set containing metadata. Entries within the categories data set contain references to other related categories. Likewise, entries within the records data set contain references (PEERS field) to other related records.

The closest prior art of record, **Belove et al.** (U.S. Patent 5,115,504) teaches an analogous system containing the records data set and categories data set (see disclosure that the first group of elements represents items and that the second group of elements represents categories, col. 1, lines 50-51), and wherein the categories entries contain references to other related categories (see col. 5, lines 3-13; see also Figure 4).

However, **Belove et al.** fails to anticipate or render obvious the recited feature of a records data set wherein each entry contains references to other related records entries (PEERS), as in dependent claims 3, 6-8, 11 and 14-16.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Malatesta et al.** (U.S. Patent 5,491,818) teaches a system for migrating application data definition catalog changes to the system level data definition catalog in a database.

**Malatesta et al.** (U.S. Patent 5,613,111) teaches a system for migrating application data definition catalog changes to the system level data definition catalog in a database.

**Hooper et al.** (U.S. Patent 5,819,282) teaches a database comprising a plurality of data objects each containing a key value and a data value.

**Bennett et al.** (U.S. Patent 5,991,776) teaches a database system with improved methods for storing free-form data objects of data records.

**Suver** (U.S. Patent 6,016,497) teaches a system for accessing and storing information embedded in a column of a database row.



**Arnold et al.** (U.S. Patent 6,032,151) teaches a database system wherein each database entry is of a given type that defines the fields of the entry.

**Chu et al.** (U.S. Patent 6,356,913) teaches a generic and dynamically-modifiable database schema organized in a tree structure.

**Scheifler et al.** (U.S. Patent 6,578,044) teaches a database system wherein one or more entry databases store a plurality of entries, with each entry being of a given type that defines the fields of the entry.

**Delo** (U.S. Patent 6,606,618) teaches a relational installation database for storing data elements in the form of strings, objects, etc.

**Russell** (U.S. Patent 6,687,704) teaches a database model system that permits changes to the data model, such as the addition, deletion or modification of attributes, through changes to the data rather than to the fundamental data model schema.

**Fittges et al.** (U.S. Patent 6,754,648) teaches a method for storing and managing data on a storage medium connected to a computer system, wherein the data consists of a plurality of data elements and a plurality of tags.

**Tewksbary** (PCT Publication WO 99/13419) teaches a method for managing information by storing object information in a relational database, including storing a separate data table for each of a plurality of data types.

**Sutherland et al.** ("The Hybrid Object-Relational Architecture (HORA)") teaches a natural and relatively transparent coupling of object-oriented clients with relational database server technology for new applications.

**Sargent et al.** ("The Design and Implementation of a Database for Human Genome Research") teaches a new data model with the advantages of representational flexibility and the reflective use of meta data to accomplish schema evolution by ordinary updates.

**Matthes et al.** ("Towards a Unified Model of Untyped Object Stores") teaches the Tycoon Store Protocol (TSP) which supports the use of polymorphic data structures.

**Marriott** ("Music Trivia and All That Jazz") teaches the Web Music DB web site.

The following reference, while not qualifying as prior art, is also of interest:

**Rappold, III** (U.S. Patent 2004/0117397) teaches an extensible database system which allows dynamic changes to be made to a relational database without requiring the use of a DDL.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke S. Wassum whose telephone number is 703-305-5706. The examiner can normally be reached on Monday-Friday 8:30-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

In addition, INFORMAL or DRAFT communications may be faxed directly to the examiner at 703-746-5658.

Customer Service for Tech Center 2100 can be reached during regular business hours at (703) 306-5631, or fax (703) 746-7240.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Luke S. Wassum  
Art Unit 2177

lsw  
15 July 2004